Museum Lib.
Fapan

CONTENTS

1948, Nos. 1-4

ANDERSON, LELAND R.
Unusual Items in the Diet of the Northern Muskellunge (*Esox masquinongy immaculatus*) 63

ARORA, HARBANS LALL
Observations on the Habits and Early Life History of the Batrachoid Fish, *Porichthys notatus* Girard (1 pl.)..... 89

ASHLEY, HAROLD R.
Muhlenberg's Turtle in Southern New York..... 220

AXTELL, HAROLD H., and RACHEL C. AXTELL
Pseudotriton ruber in Central New York State..... 64

AXTELL, RACHEL C. (*See* HAROLD H. AXTELL)

BAILEY, REEVE M.
Status, Relationships, and Characters of the Percid Fish, *Poecilichthys sagitta* Jordan and Swain (1 pl.)..... 77
Winter Mortality in the Snake *Storeria dekayi*..... 215

BARDACH, JOHN E., and E. DAVID LE CREN
A Preopercular Tag for Perch (1 fig.)..... 222

BARKALOW, FREDERICK S., JR.
Notes on the Breeding Habits of the Turtle *Kinosternon s. subrubrum*..... 130

BARTON, OTIS
Color Notes on Pacific Manta, Including a New Form (2 figs.)..... 146

BERNER, LESTER M.
The Intestinal Convolutions: New Generic Characters for the Separation of *Carpiodes* and *Ictiobus* (4 figs.)..... 140

BISHOP, SHERMAN C.
Record *Necturus* from Wisconsin Waters..... 66
(*See* WALTER C. BROWN)

BROOKS, MAURICE
Clasping in the Salamanders *Aneides* and *Desmognathus*..... 65
Notes on the Cheat Mountain Salamander (1 fig.)..... 239

BROWN, VINSON
Records of Amphibians and of the Northern Alligator Lizard in Northwestern California..... 136

BROWN, WALTER C., and SHERMAN C. BISHOP
Eggs of *Desmognathus aeneus* (1 fig.)..... 129

BURGER, W. LESLIE
Farancia abacura reinwardtii in Oklahoma (1 fig.)..... 133

CAGLE, FRED R.
Sexual Maturity in the Male Turtle, *Pseudemys scripta troostii* (3 figs.)..... 108
The Growth of Turtles in Lake Glendale, Illinois (3 figs.)..... 197

CAGLE, FRED R., and JOSEPH THEN
Retention of Eggs by the Turtle *Deirochelys reticularia* 66

CARLANDER, KENNETH D.
Some Changes in the Fish Population of Lake of the Woods, Minnesota, 1910 to 1945 271

CARVALHO, JOAO DE PAIVA (*See* SAMUEL F. HILDEBRAND)

COHEN, ELIAS
Emergence of *Coluber c. constrictor* from Hibernation 137

COOPER, BYRUM W.
An Erythristic *Liodytes alleni* 304

DAVIS, D. DWIGHT
Flash Display of Aposematic Colors in *Farancia* and other Snakes (2 figs.) 208

DEXTER, RALPH W.
More Records of Reptiles from Portage County, Ohio 139

DICKSON, JOHN D., III
Observations on the Feeding Habits of the Scarlet Snake 216

DUNDEE, HAROLD *A.*
Storeria occipitomaculata in Oklahoma 216

EATON, THEODORE H., and RICHARD M. IMAGAWA
Early Development of *Pseudacris clarkii* (23 figs.) 263

EDGREN, RICHARD A., JR.
Notes on a Large Specimen of *Phrynosoma solare* Gray 129
Notes on a Litter of Young Timber Rattlesnakes 132

ERDMAN, DONALD S. (*See* ROBERT R. MILLER)

EVANS, HOWARD E.
Variation in Ring-necked Snakes from Sullivan County, New York 212

EVENDEN, FRED G., JR.
Food Habits of *Triturus granulosus* in Western Oregon 219

FINNERAN, LEO CHARLES
Diamond-back Terrapin in Connecticut 138

FISHER, HARVEY I.
Locality Records of Pacific Island Reptiles and Amphibians 69

FITCH, HENRY S.
Further Remarks Concerning *Thamnophis ordinoides* and Its Relatives 121

FOLLETT, W. I.
A Northerly Record of *Polydactylus approximans* (Lay and Bennett), a Polynemid Fish of the Pacific Coast of Tropical America (1 pl.) 34

FOX, WADE
The Relationships of the Garter Snake *Thamnophis ordinoides* (1 fig.) 113
Effect of Temperature on Development of Scutellation in the Garter Snake, *Thamnophis elegans atratus* (2 figs.) 252

GILES, LEROY W.
Polydactylism in an Alligator 214

GINSBURG, ISAAC
Some Atlantic Populations Related to *Diplectrum radiale* (Serranidae), with Description of a new Subspecies from the Gulf Coast of the United States 266

GLASER, H. S. ROBERT
Bactericidal Activity of *Crotalus* Venom *in Vitro* 245

GNAEDINGER, LESLIE MCKAY, and CHARLES A. REED
Contribution to the Natural History of the Plethodont Salamander *Ensatina eschscholtzii* 187

GOIN, COLEMAN J.
The Occurrence of *Amyda spinifera aspera* in Florida 304

GORDON, MALCOLM S.
A Possible Function of the Urostyle in Immature *Umbra pygmaea* 224

GOSLINE, WILLIAM A.
Some Possible Uses of X-rays in Ichthyology and Fishery Research 58

GREEN, N. BAYARD
The Spade-foot Toad, *Scaphiopus h. holbrookii*, Breeding in Southern Ohio ... 65

GUNTER, GORDON
Notes on Fishes of the Genus *Scorpaena* from the South Atlantic and Gulf Coasts of the United States, with Descriptions of Two New Species (2 pls.) 157
A Discussion of Abnormal Scale Patterns in Fishes, with Notice of Another Specimen with Reversed Scales 280

HAIRSTON, NELSON G. (*See* CLIFFORD H. POPE)

HAMILTON, ROBERT
The Egg-laying Process in the Tiger Salamander 212

HAMILTON, W. J., JR.
The Food and Feeding Behavior of the Green Frog, *Rana clamitans* Latreille, in New York State 203
Hibernation Site of the Lizards *Eumeces* and *Anolis* in Louisiana 211

HARRY, ROBERT REES
New Records for the Fish, *Myrichthys tigrinus*, a Snake Eel of the Eastern Tropical Pacific, with a Relocation of the Type Locality 145
A New Name for *Paralepis danae*, a Species of Fish from near Cape Verde, Africa 221
The Distribution of the Pipefish, *Doryichthys brevidorsalis* (De Beaufort) in the East Indies 221

HILDEBRAND, SAMUEL F., and JOAO DE PAIVA CARVALHO
Notes on Some Brazilian Anchovies (Family Engraulidae) with Descriptions of Four New Species (4 figs.) 285

HORTON, C. W.
On the Mechanics of Spitting in the African Spitting Cobras 23

HUBBS, CARL L.
"Leapfrogging" by Topsmelt and Shark 298

IMAGAWA, RICHARD M. (*See* THEODORE H. EATON, JR.)

INGER, ROBERT F.
The Systematic Status of the Crocodile *Osteoblepharon osborni* (2 figs.) 15

KAUFFELD, C. F.
Introduced Fence Lizards on Staten Island, New York 301
Notes on a Hook-nosed Snake from Texas 301

KLAUBER, L. M.
Some Misapplications of the Linnaean Names Applied to American Snakes.... 1

KLIMSTRA, W. D.
An Iowa Record of the Keeled Green Snake 138

KOSTER, WILLIAM J.
Notes on the Spawning Activities and the Young Stages of *Plancterus kansae* (2 figs.) 25

KRUMHOLZ, LOUIS A.
The Mosquitofish, *Gambusia*, Established in the Great Lakes Region..... 144

LARA, FRANCISCO J. S.
Notes on the Generic Position of Two Brazilian Sciaenid Fishes, *Archoscion petranus* Miranda Ribeiro, and *Symphysoglyphus bairdii* (Steindachner).. 226

LE CREN, E. DAVID (*See* JOHN E. BARDACH)

LIVEZEY, ROBERT L.
Distributional Records of Amphibians in East Texas..... 67

LOCKLEY, A. S.
Note on the Three-toed Box Turtle..... 132

LOVERIDGE, ARTHUR
The Lizard *Amphisbaena kraussi* Rediscovered in the Gold Coast..... 213

MARR, JOHN C.
Two Additions to the Known Fish Fauna of California..... 140

MILLER, LOYE
An Enemy of the Horned Lizard 67

MILLER, R. B.
A Note on the Movement of the Pike, *Esox lucius*..... 62

MILLER, RALPH G. (*See* ROBERT R. MILLER)

MILLER, ROBERT R., and DONALD S. ERDMAN
The Range and Characters of *Synchirus gilli*, a Remarkable Cottid Fish of the Northeastern Pacific (1 pl.) 85

MILLER, ROBERT R., and RALPH G. MILLER
The Contribution of the Columbia River System to the Fish Fauna of Nevada: Five Species Unrecorded from the State (1 map)..... 174

MOORE, GEORGE A.
Notropis perpallidus Hubbs and Black in Oklahoma 63

MOSIMANN, JAMES E., and GEORGE B. RABB
The Salamander *Ambystoma mabeei* in South Carolina 304

MUNRO, IAN S. R.
Sparidentex hasta (Valenciennes), a New Name for *Chrysophrys cuvieri* Day (1 fig.) 275

NEILL, WILFRED T.
Odor of Young Box Turtles 130
Salamanders of the Genus *Pseudotriton* from Georgia and South Carolina..... 134
Extra-uterine Embryos in Snakes 139
The Status of the Salamander *Desmognathus quadramaculatus amphileucus*.. 218
An Unusual Variant of *Plethodon glutinosus* in South Carolina (1 fig.)..... 247

NICHOLS, J. T.
On *Caranx nigripinnis* from the Persian Gulf 300

PARR, ALBERT EIDE
The Classification of the Fishes of the Genera *Bathylaco* and *Macromastax*, Possible Intermediates between the Isospondyli and the Iniomi (2 figs.).. 48

PERKINS, C. B.
Longevity of Snakes in Captivity in the United States..... 217

PHILLIPS, J. B.
Comparison of Calculated Fish Lengths Based on Scales from Different Body Areas of the Sardine, *Sardinops caerulea* (2 figs.) 99

POPE, CLIFFORD H., and NELSON G. HAIRSTON
Two New Subspecies of the Salamander *Plethodon shermani*..... 106

PRASAD, R. RAGHU
Observations on the Nidamental Glands of *Hydrolagus colliei, Raja rhina* and *Platyrhinoidis triseriatus* (3 figs.) 54

RABB, GEORGE B. (*See* JAMES E. MOSIMANN)

REED, CHARLES A. (*See* LESLIE MCKAY GNAEDINGER)

ROEDEL, PHIL M.
Pacific Mackerel in the Gulf of California (1 fig.)..... 224

SALT, GEORGE W., and ROBERT C. STEBBINS
Northward Occurrence of the Canyon Tree-toad in California (1 fig.)..... 131

SAVAGE, JAY M.
The Pine Snake in Kentucky 302

SCATTERGOOD, LESLIE W.
Notes on Some Gulf of Maine Fishes..... 142

SCHULTZ, LEONARD P.
The Use of Rotenone for Collecting Reef and Lagoon Fishes at Bikini..... 94

SHIMADA, BELL M.
Records of Lantern Fish in Puget Sound..... 227

SHREVE, BENJAMIN
A New *Liolaemus* from Paraguay 111

SIGLER, WILLIAM F.
Determination of Sex in the White Bass, *Lepibema chrysops*, from External Characters (1 fig.) 299

SILLIMAN, RALPH P.
Factors Affecting Population Levels in *Lebistes reticulatus* (1 fig.)..... 40

SLATER, JAMES A.
The Incidence of Poisonous Snakes on Okinawa Shima (Ryukyu Islands).... 136

SPRINGER, STEWART
Oviphagous Embryos of the Sand Shark, *Carcharias taurus* 153

STEBBINS, ROBERT C.
Additional Observations on Home Ranges and Longevity in the Lizard *Sceloporus graciosus* 20
(*See* GEORGE W. SALT)

STROUD, RICHARD A.
Notes on Growth of Hybrids between the Sauger and the Walleye (*Stizostedion canadense canadense* × *S. vitreum vitreum*) in Norris Reservoir, Tennessee 297

TAYLOR, EDWARD H.
Two New Hylid Frogs from Costa Rica (2 figs.) 233

TIHEN, JOSEPH (*See* FRED R. CAGLE)

TRAUTMAN, MILTON B.
A Natural Hybrid Catfish, *Schilbeodes miurus* × *Schilbeodes mollis* (1 pl.) 166

TRIPLEHORN, CHARLES A.
Storeria occipitomaculata in Northwestern Ohio 133

TUBB, J. A.
Whale Sharks and Devil Rays in North Borneo 222

UPHOFF, DELTA E.
A New Mounting Medium for Fish Scales 62

VORHIES, CHARLES T.
Food Items of Rattlesnakes (1 fig.) 302

WOODBURY, ANGUS M.
Marking Reptiles with an Electric Tatooing Outfit 127